CLAIMS:

1. A method for processing an initial image of coronary arteries, the initial image given by an intensity function I(x,y) defined on a set of pixels (x,y), so as to produce a processed image of the coronary arteries having an intensity function I'(x,y), comprising steps of:

(a) obtaining a function z(x,y) describing a heart surface over the initial image; and

(b) calculating the intensity function I' based upon the function z.

2. The method according to Claim 1, wherein the function z(x,y) describes an ellipsoidal surface over the initial image.

3. The method according to Claim 2 wherein the ellipsoidal surface has a first axis and a second axis coinciding with the length and width, respectively, of the heart in the initial image, and a third axis perpendicular to the image.

4. The method according to Claim 3 wherein the third axis has a predetermined constant times the length of the first or second axis.

5. The method according to Claim 4 wherein the predetermined constant is from about 0.3 to about 0.8 times the length of the first axis.

6. The method according to Claim 1 wherein I'(x,y) is given by the algebraic expression

$$I'(x,y)=\left[\frac{z(x,y)}{\alpha}+1\right]I(x,y),$$

wherein α is a predetermined constant.

7. The method according to Claim 6, wherein α is from about 0.1 to about 5.

8. A method for processing a first initial digital image of coronary arteries and a second initial digital image of the coronary arteries, the first and second digital images having been obtained from different perspectives of the arteries, so as to produce a first processed image and a second processed image, the method comprising steps of:

(a) processing the first initial digital image by the method of Claim 1; and

(b) processing the second digital image by the method of Claim 1.

9. The method according to Claim 8 further comprising a step of presenting the first and second processed images for stereoscopic viewing.

10. A computer program product comprising a computer useable medium having computer readable program code embodied therein for processing an initial image of coronary arteries, the initial image given by an intensity function I(x,y) defined on a set of pixels (x,y), so as to produce a processed image of the coronary arteries having an intensity function I'(x,y), the computer program product comprising:

computer readable program code for causing the computer to obtain a function z(x,y) describing a heart surface over the initial image; and

computer readable program code for causing the computer to calculate the intensity function I' based upon the function z,

11. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for processing a first initial digital image of coronary arteries and a second initial digital image of the coronary arteries, the first and second digital having been obtained from different perspectives of the coronary arteries, so as to produce a first processed image and a second processed image, the method comprising steps of:

(a) processing the first initial digital image by the method of Claim 1; and

(b) processing the second digital image by the method of Claim 1.

12. A computer program product comprising a computer useable medium having computer readable program code embodied therein for processing a first initial digital image of coronary arteries and a second initial digital image of the coronary arteries, the first and second digital images having been obtained from

different perspectives of the coronary arteries, so as to produce a first processed image and a second processed image, the computer program product comprising:

computer readable program code for causing the computer to process the first initial digital image by the method of Claim 1; and

computer readable program code for causing the computer to process the second digital image by the method of Claim 1.